

## WE CLAIM:

1. A printed-circuit board (PCB) test jack, comprising:

a body portion arranged to interface with an external test probe,

at least one surface mount conductor connected to said body portion and arrayed for attaching to corresponding surface pads on the surface of a PCB, and

a signal conductor connected to said body portion, comprising a single through-hole pin for insertion into a corresponding single through-hole on said PCB.

2. The test jack of claim 1, wherein said body portion is cylindrical and said at least one surface mount conductor comprises one surface mount conductor which extends approximately perpendicularly from said body portion.

3. The test jack of claim 1, wherein said body portion is cylindrical and said at least one surface mount conductor comprises two surface mount conductors which extend approximately perpendicularly from opposite sides of said body portion such that said surface mount conductors are 180° apart.

4. The test jack of claim 1, wherein said body portion is cylindrical and said at least one surface mount conductor comprises three surface mount conductors which extend approximately perpendicularly from said body portion such that said surface mount conductors are  $120^\circ$  apart.

5. The test jack of claim 1, wherein said body portion is cylindrical and said at least one surface mount conductor comprises four surface mount conductors which extend approximately perpendicularly from said body portion such that said surface mount conductors are  $90^\circ$  apart.

6. The test jack of claim 1, wherein said body portion is cylindrical and said at least one surface mount conductor comprises a ring-shaped conductor that encircles and extends approximately perpendicularly from said body portion.

7. The test jack of claim 6, wherein said ring-shaped circular conductor comprises at least two thermal reliefs spaced periodically around said body portion.

8. The test jack of claim 1, wherein said PCB further comprises an inner ground plane layer and vias from said corresponding surface pads to said inner ground plane layer.

9. The test jack of claim 1, wherein said PCB is a high-density multi-layer PCB.

10. The test jack of claim 1, further comprising a PCB to which a plurality of said PCB test jacks are to be mounted, said PCB comprising corresponding surface pads and through-holes for mounting each of said PCB test jacks.

11. The test jack of claim 1, wherein said body portion comprises a signal connection that interfaces with said external test probe and is electrically connected to said single through-hole pin, and a ground connection that interfaces with said external test probe and is electrically connected to said at least one surface mount conductor.

12. A printed-circuit board (PCB) test jack, comprising:

a body portion arranged to interface with and to provide signal and ground connections to an external test probe,

at least one surface mount ground conductor that extends from said body portion and is connected to said body portion for providing said ground connection, said ground conductors arrayed for attaching to corresponding surface pads on the surface of a PCB, and

a signal conductor connected to said body portion for providing said signal connection, comprising a single through-hole pin for insertion into a corresponding single through-hole on said PCB.

13. The test jack of claim 12, wherein said at least one surface mount ground conductor extends approximately perpendicularly from said body portion.

14. The test jack of claim 12, wherein said PCB further comprises an inner ground plane layer and vias from said corresponding surface pads to said inner ground plane layer.

15. The test jack of claim 12, wherein said PCB is a high-density multi-layer PCB.

16. The test jack of claim 12, further comprising a PCB to which a plurality of said PCB test jacks are to be mounted, said PCB comprising corresponding surface pads and through-holes for mounting each of said PCB test jacks.

17. A printed-circuit board (PCB) test jack, comprising:

a body portion arranged to interface with and provide signal and ground connections to an external test probe,

at least one surface mount ground conductor connected to said body portion and arrayed for attaching to corresponding surface pads on the surface of a PCB, said at least one surface mount ground conductor providing said ground connection between said PCB and said external test probe when attached to said corresponding surface pad, and

a surface mount signal conductor connected to said body portion and arrayed for attaching to a corresponding surface pad on the surface of a PCB, said surface mount signal conductor providing said signal connection between said PCB and said external test probe when attached to said corresponding surface pad.